THE DIMENSIONALITY OF NATIONS PROJECT

FACTOR 2

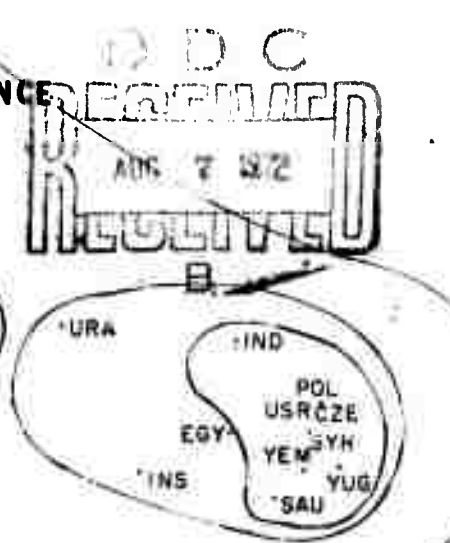## RESEARCH REPORT

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THE DIMENSIONALITY OF NATIONS PROJECT
Department of Political Science
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RESEARCH REPORT NO. 63

POLITICAL DESIGN
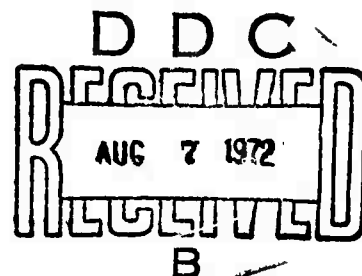
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13 ABSTRACT

Political design means the creation of political forms to fulfill specified political functions. While conventional approaches to politics reinforce the sense that we are simply subject to the social system, design emphasizes the possibilities for managing and creating social systems for the fulfillment of human values.

The design process begins with the specification of the functions that the proposed political structure is to perform. This is followed by the articulation of the structural design questions asking what particular arrangements are to be made. Varieties of different answers are then suggested. Since the choice that would be made for any given design question is likely to be conditional on the answers given to certain other design questions, some groups of questions interact and thus form clusters, or subsidiary design problems which are separable from other such clusters. It is helpful to separate the task of developing a variety of different proposed solutions for each design problem from the task of choosing among them. Generally, several different proposals should be developed, with extensive efforts made to accommodate incompatible value systems. The choices among alternative designs should be based on explicitly stated reasons, with full acknowledgement of the relative advantages and disadvantages for different affected parties.

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Political design means the creation of political forms to fulfill specified political functions. While conventional approaches to politics reinforce the sense that we are simply subject to the social system, design emphasizes the possibilities for managing and creating social systems for the fulfillment of human values.

The design process begins with the specification of the functions that the proposed political structure is to perform. This is followed by the articulation of the structural design questions asking what particular arrangements are to be made. Varieties of different answers are then suggested. Since the choice that would be made for any given design question is likely to be conditional on the answers given to certain other design questions, some groups of questions interact and thus form clusters, or subsidiary design problems which are separable from other such clusters. It is helpful to separate the task of developing a variety of different proposed solutions for each design problem from the task of choosing among them. Generally, several different proposals should be developed, with extensive efforts made to accommodate incompatible value systems. The choices among alternative designs should be based on explicitly stated reasons, with full acknowledgement of the relative advantages and disadvantages for different affected parties.

The most difficult and demanding political design problem is that of formulating sound models for the global interrelationships of the future. If the design of world order models is to advance, it will be necessary to identify the essential structural design questions that must be posed. The design agenda needs to be set.

THE DIMENSIONALITY OF NATIONS PROJECT
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POLITICAL DESIGN

George Kent

Why Design?

Political design means the creation of political forms to
fulfill specified political functions. A few procedural guidelines
for approaching design problems will be suggested here, but none of
them is indispensable. What is important is that they help to show
that it is possible, legitimate, and worthwhile to engage in political
design. The art needs to be developed, in depth so that those who do
it can do it better, and in breadth so that more of us can do it. It
should be raised to fuller self-consciousness so that we can appreciate
that the political structure of the future is in fact ours to decide.

The design perspective contrasts sharply with conventional
approaches to the study of politics. Political science reinforces
passive, noninterventionist observation. Students are taught to
analyze, to take things apart, not to synthesize and create. Political
scientists claim that they aspire to greater control through increased
understanding, but in practice they simply ask how events will evolve,
as if their evolution was somehow preordained. Empirical studies most
prominently display the constraints and limitations on what can be done.

Even the futurists usually fail to go beyond certifying the gravity of impending social problems.[1]

Charles Hampden-Turner argues that "the projection of present trends into the future represents a vote of temporary approval for such trends."[2] This must grate on social scientists who claim with full honesty and the best intentions that their study is motivated by the desire to improve the system, not to reinforce it in its existing state. What, then, is the problem?

The difficulty is that, regardless of the scientist's motivations, his methods are not politically neutral; they are inherently conservative. In Hampden-Turner's view:

> By concentrating upon the technical and material aspects of the trends, the impression is fostered that these things "are," like stars and planets around us, so that "realistic" men must humbly subordinate their minds to these physical "facts"....
> But these projections of existing trends are quite unlike the physical universe of dead objects. They are cultural, political, and social choices.[3]

[1]On the constrained imaginations of empiricists and futurists, cf. Henry Kariel, "Expanding the Political Present," American Political Science Review, Vol. LXIII, No. 3 (September 1969), pp. 768-776; Harry Targ, "Social Science and a New Social Order," Journal of Peace Research, No. 3-4 (1971), pp. 207-220; Elise Boulding, "Futuristics and the Imaging Capacity of the West," in Margoroh Maruyama and James A. Dator (eds.), Human Futuristics, Honolulu: Social Science Research Institute, 1971, pp. 29-53.

[2]Charles Hampden-Turner, Radical Man, Cambridge, Mass.: Schenckman, 1970, p. 305, quoted in Boulding, "Futuristics ...."

[3]Hampden-Turner, Radical Man, pp. 305-306, quoted in Boulding, "Futuristics ...."

Political systems are studied as if they were no different from biological or solar systems, but things like the European Economic Community, the Antarctic Treaty, or the Warsaw Pact are really very unnatural. As products of highly deliberate political design efforts, they are very different from things which more or less "just happen," such as the balance of power system. In Rousseau's terms, "the political organization of this part of the world is to a certain extent the work of nature .... Let us not imagine that this boasted balance of power has been achieved by anyone."[4] To study political inventions as if they were natural is to overlook the fact that they are meant to serve human purposes. It is this insight which provides the basis for what Herbert Simon calls the "sciences of the artificial," and thus the science of design, which he advances as the appropriate alternative to the approach of the natural sciences.[5]

Functionalism, in a variety of forms, does try to explain social systems in terms of their meeting goals, purposes, needs.[6] Its useful-

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[4] Quoted in F. H. Hinsley, Power and the Pursuit of Peace, Cambridge: Cambridge University Press, 1967, p. 57.

[5] Herbert A. Simon, The Sciences of the Artificial, Cambridge: M.I.T. Press, 1969. In his excellent account of the design process from the engineer's perspective, Krick quotes Theodore von Kármán's observation that "Scientists explore what is and engineers create what has never been." See Edward V. Krick, An Introduction to Engineering and Engineering Design," New York: Wiley, 1969, p. 36.

[6] Cf. Gabriel A. Almond and G. Bingham Powell, Jr., Comparative Politics: A Developmental Approach, Boston: Little, Brown, 1966; Philip E. Jacob, Alexine L. Atherton, and Arthur M. Wallenstein, The Dynamics of International Organization, Revised Edition, Homewood, Ill.: Dorsey, 1972. It is sometimes argued (as in Richard S. Rudner's Philosophy of Science, Englewood Cliffs, N. J.: Prentice-Hall, 1966) that it is not necessary to analyze social systems in terms of values or preferences, that is, as teleological systems. Certainly it is not necessary, but it is still both possible and useful.

ness to the designer is limited, however, precisely because it is totally concerned with explaining what is. Functionalists examine existing systems and then speculate on what functions might account for those forms. They do not create, identifying needs first and then inventing forms to fulfill those needs.

Emphasis on empirical research, on forecasting, or on explaining reinforces the feeling that we are subject to the social system, rather than the reverse. The study of design, in contrast, should be a great liberator. Surely, the designer cannot ignore social realities, but he can learn to see them as instruments rather than as crippling constraints. The study of design should free us for effective imagining, for visionary and yet disciplined invention and innovation.

Prescriptive Policy Analysis, Design, and Planning.

A brief review of some of the ways in which the terms prescriptive policy analysis, design, and planning are used should help to bring out some conceptually useful differentiations. The purpose here is not to reorganize and purify the language. It is important to make the distinctions, but it does not matter much how they are labeled.

For me, prescriptive policy analyses are systematic studies designed to produce well-reasoned recommendations for action dealing with concrete political problems. The question posed might be something like "What should Cuba do about the American base at Guantanamo?"

or "What should be done about the Middle East conflict?" In every case, policy analyses respond to the question, what should be done?[7]

Design, however, is directed toward the creation of new political structures.

Policy analyses generally focus on individual, possibly unique problems. Design, in contrast, is concerned with establishing structures and process to deal with whole classes of problems. An arms control inspection system, for example, would be designed to cope with violations generally, rather than with some particular violation. This is probably the single feature which best differentiates design from policy analysis.

I think of prescriptive policy analysis as ordinarily referring to situations embedded within stable, ongoing structures, while design does not assume that continuity. This corresponds to the distinction Boguslaw makes between "established" and "emergent" situations.[8] The policy analyst ordinarily calls for discrete actions intended to adjust the values of variables within the given system. The political designer, however, wants to invent new relationships among variables. This is why he is not much concerned with careful empirical studies of existing structures. In Saul Mendlovitz's terms, the designer hopes

[7]For a more thorough treatment, see my _Prescribing Foreign Policy_, University of Hawaii, Dimensionality of Nations Project, Research Report No. 59, January 1972.

[8]Robert Boguslaw, _The New Utopians: A Study of System Design and Social Change_, Englewood Cliffs, N. J.: Prentice-Hall, 1965, pp. 7-8.

to "free the future from the past."[9] The designer is bolder, more

imaginative, and perhaps a good deal more foolish than the analyst.

Policy analysis is likely to be reactive, be concerned with

short-term problems, and deal in ameliorative proposals. Political

design, in contrast, is more likely to try to anticipate problems, to

focus on the long run, and to try to find deep-rooted solutions to

problems.

Policy analyses usually have the key actors selected in advance.

That is, the policy analyst is likely to ask what some specified country

or organization should do about the problem. The designer, however,

would begin by asking what should be done, and then let the study itself

indicate the most appropriate actors.

There is no reason why it must be so, but as Philip King has

pointed out, the values served by policy analysts are likely to be

more limited, narrow, and parochial than those of designers. The

policy analyst generally addresses his work to a more narrowly speci-

fied constituency.

Because of the modesty and close proximity in time and space

of the actions he recommends, the policy analyst is concerned with

relatively simple implementation procedures, whereas the designer must

prepare grand transition strategies. The designer is likely to make a

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[9]W. Warren Wagar, Building the City of Man: Outlines of a
World Civilization, New York: Grossman, 1971, p. vii.

sharper distinction between means and ends than the policy analyst,
although designers now seem to think more and more in terms of creating
an ongoing process rather than in terms of reaching some relatively
fixed and well defined end.

Design generally begins with the articulation of some desired
future end, whether as a condition or as a process, and then searches
for means to those ends. In policy analyses, however, one can some-
times begin with a survey of the repertoire of possible actions.
After the actions are identified, the analyst asks to what end each
of them might lead. Confronted with Soviet missiles in Cuba, for
example, the United States had only a limited variety of possible
actions to consider. Efficiency considerations in such cases suggest
beginning with the question: What sorts of things could be done about
the problem? It is reasonable to begin with the examination of means
rather than ends where the variety of possible means to be examined
is small in comparison with the number of possible ends. In thinking
about the structure of say, an International Development Agency,
however, the variety of actions which can be considered is, at the
outset, too great to contemplate. In design problems it is necessary
to explicitly formulate some target, however roughly and tentatively,
before it becomes worthwhile to ask what sorts of things could be
done to reach the desired end.

There is a great deal of overlap among planning, policy analysis,
and design, as is evident from the definition of planning as "the
process of preparing a set of decisions for action in the future,

directed at achieving goals by optimal means."[10] Another observer says simply that "planning is thinking ahead with a view to action."[11] The differences are differences of emphasis. In my thinking, planning is similar to policy analysis in that it tends to assume the continuation of the existing political system. (According to one harsh view, planning "is the way for those who presently held power to project their continuation in power over the period of years ahead."[12]) At its core, planning is based on the extrapolation of present trends; it places no great emphasis on creativity. Like policy analysis, planning tends to frame its problems in terms of making choices among "existing" alternatives rather than in terms of creating new alternatives. It is more concerned with tuning variables than with inventing wholly new relationships among variables.

In any design problem, there are certain aspects which are viewed as controllable, as form to be shaped, as resources; and other aspects which are viewed as constraints, as parts of the environment,

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[10]Yehezkel Dror, "The Planning Process: A Facet Design," in Fremont J. Lyden and Ernest G. Miller (eds.), Planning Programming Budgeting: A Systems Approach to Management, Chicago: Markham, 1967, pp. 93-116. An interesting typology of planning may be found in Warren L. Ziegler, "The Future of Education: Who Speaks for Mankind," presented at the Congress on the Future: Education, December 1970.

[11]George A. Morgan, "Planning in Foreign Affairs: The State of the Art," Foreign Affairs, Vol. 39, No. 2 (January 1961), pp. 271-278.

[12]Arthur I. Waskow "Looking Forward: 1999," in Robert Jungk and Johan Galtung (eds.) Mankind 2000, Oslo: Universitetsforlaget, 1969, p. 83.

as requirements imposed on the design. In Christopher Alexander's words:

> ... every design problem begins with an effort to achieve fitness between two entities: the form in question and its context. The form is the solution to the problem; the context defines the problem. In other words, when we speak of design, the real object of discussion is not the form alone, but the ensemble comprising the form and its context ....
> The form is a part of the world over which we have control, and which we decide to shape while leaving the rest of the world as it is. The context is that part of the world which puts demands on this form; anything in the world that makes demands of the form is context.[13]

Alexander also notes an important point of ambiguity. Some writers, like Alexander himself, use the term "system" to refer to the whole ensemble, consisting of both form and context, while others refer to that part of the ensemble which is held constant as the environment, and call only the part under adjustment the "system."[14] In this essay, I will follow Alexander's usage and use the term "system" to refer to the whole ensemble.

There is always some choice in what is to be regarded as manipulable form and what is to be regarded as constraining context. One of the major differences between the policy analyst and the political designer is that the policy analyst takes much more to be fixed and given than does the designer.

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[13]Christopher Alexander, Notes of the Synthesis of Form, Cambridge: Harvard University Press, 1964, pp. 15-16, 18-19.

[14]Alexander, Notes ..., p. 196. For C. West Churchman, in contrast, "The environment of the system is what lies 'outside' of the system." C. West Churchman, The Systems Approach, New York: Delta, 1968, p. 34.

But it is a mistake to draw this distinction too sharply, as if the analyst's and the designer's roles were wholly different. The opportunities for reinterpreting problems should be exploited to the fullest:

> There are two sides to this tendency designers have to change the definition of the problem. On the one hand, the impractical idealism of designers who want to redesign entire cities and whole processes of manufacture when they are asked to design simple objects is often only an attempt to loosen difficult constraints by stretching the form-context boundary.
> On the other hand, this way in which the good designer keeps an eye on the possible changes at every point of the ensemble is part of his job. He is bound, if he knows what he is doing, to be sensitive to the fit at several boundaries within the ensemble at once. Indeed, this ability to deal with several layers of form context boundaries in concert is an important part of what we often refer to as the designer's sense of organization. The internal coherence of an ensemble depends on a whole net of adaptations. In a perfectly coherent ensemble we should expect the two halves of every possible division of the ensemble to fit one another.[15]

An intergovernmental institution, for example, should have sound internal operations, satisfy the participating countries' foreign policy requirements, meet domestic political demands, and also interrelate effectively with other institutions as well. The structure desired in the long term should be sound, and the short term plans for implementation should fit into current political realities. Any individual trying to develop prescriptions for political action

[15]Alexander, Notes ..., pp. 17-18.

should scan the full spectrum between the idealized prototypes of the
policy analyst and the designer, exploring problems from the more
conservative perspectives and adapting to the many constraints, and
then varying assumptions to explore openings for boldness.

Dynamic Ends and Dynamic Means

In our arrogance and short-sightedness, our prescriptions respond
to what we view as major problems now. This tendency to ground designs
for the future in conditions which prevail in the designer's present is
plainly evident in the long history of the formulation of utopias. But
the consciousness of problems changes rapidly. The poor may always have
with us, but poverty has only recently been discovered as a genuine
social problem. Just because nuclear war is high on the agenda now
does not mean it will always be a central issue. The spectacular rise
of ecological issues in public awareness in the 1960s and 1970s
suggests that they can fall away and be replaced just as quickly.

We must be careful not to fix overly rigid forms on the basis
of current priorities. If they are to live, these forms must be given
life from the outset. No system will last if it is built to function
under only one set of conditions. Any political design should have
adaptive mechanisms built into it so that it can adjust to new circum-
stances and to new problems.

To put this another way, rather than being best for all time,
the optimum may be "path dependent" in the sense that the best order
at any given period depends on its immediate pre-history. Problems

are not simply solved and permanently disposed of. Old problems are
traded in on new ones, and what you can get depends in part on what
you've got. The designer's job is simply to arrange for the best
possible deal.

One way to institute continuous adaptation is to engage in, and
plan for, continuous design. Political design should be understood as
an endless process, not in the sense of having no goals, but in the
sense of having no termination. Design should continue until implemen-
tation is achieved, and then continue again, beyond that implemen-
tation, to deal with the new problems that are inescapably introduced
with the eradication of old problems.

Designs should undergo constant revision even before implemen-
tation. Arthur Waskow portrays the long term dynamism that he would
hope for:

> Sitting in 1967, one cannot expect to draw a 1999
> which world society will, in fact, be like 1999. We
> must expect exactly the opposite: that along the
> way the processes of imagination and creation will
> lead one to change his imagination. Hopefully, the
> process will engage wholly new people in imagining
> the future who do not now imagine it, and by doing
> that will engage them in creation of a kind of
> future which was not imagined by the ones who began
> the process. That's one of the major goals. And
> therefore, one should never expect to achieve that
> image, one should expect to move in the direction
> of it; one should expect perhaps to move in some
> quite different direction after moving part of the
> way, but never to it ... this process never ends;
> not only is the process itself always open-ended,
> but so is the result.
> Thus one starts with a mythical vision, a pro-
> visional vision, of the future as an open-ended

future: a future which is free to decide on its
own future ....[16]

The process should be dynamic even within the individual
designer's work. Design should be viewed as a continuous process
which, at its core, demands the continuous reeducation of the designer.
This means that he cannot isolate himself. He should go beyond being
"open and available" and actively seek out new and different perspec-
tives and values. For example, for any given function or any given
form, he should constantly ask, who does it help, and who does it harm?
Presumptions are likely to be highly unreliable; people do not always
appreciate what others regard as good for them. They must be asked.
The designer might, for example, learn to his surprise that not every-
one appreciates the cooling of crises. He might find that the under-
class does not see such functions as politically neutral at all, but
rather as clearly counterrevolutionary. Such things may not be obvious
at first, but the designer should be prepared to go out and learn
them. Information of this sort should be searched out even though it
may mean disturbing or discarding designs which had seemed elegant and
which had taken great effort to develop. The designer must resist
closure and he must resist pride of authorship. He should be restless
and always dissatisfied, but he should know how to use his dissatisfac-
tion constructively, which means that he should know how to learn.

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[16]Waskow, "Looking Forward: 1999," pp. 80-81.

Premises, Assumptions, Principles

One is supposed to lay out the basic premises, assumptions, and principles which underlie any sort of study, and this applies to design work as well. The instruction is commonplace, but it suddenly becomes much less simple-minded when you ask, how? Not having any clean answer to offer here, I will simply bring out some of the surrounding issues.

What _is_ an assumption? A statement to be accepted without argument or evidence? An empirical generalization? A generalized value statement? An assertion of preference? What makes an assumption relevant and worth stating? Surely not everything that is taken for granted in a particular study needs to be enumerated. And what is a principle? My dictionary says that it is "the ultimate source, origin, or cause of something," but this does not help very much. How can one discover the root principles in particular contexts? Stipulation based on the authority of Webster's is not much help.

No formal set of rules will serve, but guidance can be drawn from an examination of the premises that are articulated in other related design efforts. For example, those interested in world order models design might begin with the Introduction to the monumental World Peace Through World Law. Grenville Clark and Louis Sohn enumerated these underlying principles of their work:

> First: It is futile to expect genuine peace until there is put into effect an effective system of enforceable world law in the limited field of war prevention ....
> Second: The world law against international violence must be explicitly stated in constitutional and statutory form ....

> Third: World judicial tribunals to interpret and
> apply the world law against international violence
> must be established and maintained, and also organs
> of mediation and conciliation ....
> Fourth: A permanent world police force must be
> created and maintained ....
> Fifth: The complete disarmament of all the nations
> ... is essential for any solid and lasting peace ....
> Sixth: Effective world machinery must be created to
> mitigate the vast disparities in the economic condi-
> tions of various regions of the world ....[17]

These principles are, of course, highly debatable. Even apart from disputing their truth, one might challenge them as ill-formed and ambiguous. What is the source of the necessity, the requiredness that is referred to here (and in principles asserted throughout the remainder of their Introduction as well)? Is there logical entailment involved? By what argument, with what conditions? Are these "musts" based on empirical generalizations asserting that one kind of event cannot occur unless some other kind of event occurs? Or do the authors simply mean to say that they think these things would be strongly desirable? These ambiguities should be resolved.

Here are some other asertions which sound like principles from Warren Wagar's Building the City of Man:

> In the very nature of the sovereign nation-state
> system, nations look for quarrels .... (p. 8)
>
> Total war will come because the nineteenth- and
> twentieth-century international power system
> remains intact .... (p. 11).
>
> Left to its own devices, the [international] system
> ... is programmed for inevitable self-destruction.
> (p. 112)

[17]Grenville Clark and Louis B. Sohn, World Peace Through World Law: Two Alternative Plans, Third Edition Enlarged, Cambridge: Harvard University Press, 1966, pp. xv-xvi.

> [We should try] consciously and concertedly to build
> a new world civilization ... to bring the whole
> known world under one law and one cultural configur-
> ation. (pp. 28-29)
>
> Mankind needs a whole new civilization, not merely
> a redistribution of power or income within existing
> structures. (p. 42)
>
> Our coming civilization can be nothing less than a
> complete organism: a unitary world republic nurtured
> by a new world culture. Cosmopolitanism prescribes
> creation, not compromise .... Cosmopolitanism
> explicitly rejects the goals of cultural pluralism
> and international federalism .... (pp. 52-53)
>
> To bring into being an authentic world government,
> we must first bring into being an authentic world
> political party. (p. 59)
>
> Strategies involving violence must be rejected as
> counterproductive, at least for the time being.
> (p. 62)
>
> Concretely, the final goal of the world party in
> every country will be the mundialization of national
> power, the transfer of sovereign power intact and
> complete to the world republic. (p. 66)
>
> The world state ... will be unitary, democratic,
> socialist, and liberal. (p. 142)[18]

We may agree or disagree with these statements. The crucial

thing about them is that once Clark and Sohn or Wagar raise these

points, they can no longer be ignored. They demand attention, whether

to be embraced or rejected — or reformulated. It is this demand

which elevates these assertions to the status of important premises

or principles.

Stating premises, assumptions, or principles in political

design work generally mean describing your views on such major issues

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[18]Wagar, Building the City of Man.

as (1) how the political world operates; (2) what are the major problems; (3) what sorts of arrangements could feasibly be achieved in the future; and (4) what future arrangements would be desirable or undesirable.

Only those questions need to be raised whose answers are likely to have some effect in shaping the resulting design. For example, one's answer to the question of whether or not freedom of travel is good, in the abstract, is not likely to determine the shape of one's proposed world order design. On the other hand, views on whether world government can be achieved or should be achieved will certainly bear on the formation of one's proposals. The test of the relevance of any premise is the degree to which it is likely to affect the formulation and choice of designs.

The important premises which underlie a given design effort cannot all be spelled out at the outset, but many can be recognized as the work proceeds. A continuing, conscientious effort should be made to articulate those basic principles on which any particular design is based.

While this self-examination is useful both to the designer and to his critics, it should not be overdone. The requirement for articulating underlying premises and principles should never be pressed so far that it impedes the design work. If the premises really matter, they will manifest themselves in the proposal which finally emerges.

Values

Having a political design problem means wanting the conceptual
invention and practical innovation of a regularized procedure for
dealing with some class of potentially recurring political problems.
There is a feeling that something should be arranged, but it is not
clear what.

This desire, in turn, is motivated by the anticipation that, if
nothing is done, some important values will go unfulfilled. For
example, one might take up the problem of designing a new health care
delivery system because of the expectation that the old system will
not provide services adequate to the needs of certain classes of
people; or one might propose establishing a system to monitor inter-
national arms transfers in the hope and the belief that such a system
would help to limit what would otherwise be excessive arms traffic.

Values play two different roles in the design process. At the
outset, they provide the motivation for engaging in the work and
determine the general sort of design that will be proposed. At this
early stage, it is only the major kinds of values that are to be
served that need to be stated. Detailed specifications of priority
orderings or of trade-offs among the different values are not needed.

Explicit values enter once again toward the conclusion of a
design task after a number of concrete proposals have been formulated.
Values are called upon in the evaluation process where alternative,

competing proposals are compared to determine which of them is preferred and should be selected. Values are brought to bear to decide the relative advantages and disadvantages, benefits and costs of the different candidate proposals. It is here that relatively precise specifications of the relationships among the different values may be required.

The question of which values will be relevant for guiding the choice among different concrete proposals cannot be answered conclusively until the proposals themselves become visible. Since there is no way to know in advance which particular values will serve to differentiate competing proposals, it is pointless to argue over the relative merits of different value hierarchies before developing concrete designs. In design, the purpose of clarifying values is to help guide choice, and if it is not known what choices need to be made, it cannot be known what values need to be clarified. The most useful debate over values is likely to be that conducted in reference to the relative merits of specific elaborated design proposals.

The importance of the evaluation process tends to be greatly exaggerated. A good political design is obviously good. If the choice is difficult and controversial, that in itself is an advance warning that each of the alternative proposals contains the seeds of future controversy. Instead of thinking entirely in terms of differentiating proposals and choosing among them, the designer should also think in terms of amalgamating proposals to combine their best features. The analysis of closely competing alternatives should, if possible, lead

to their synthesis in a new, clearly superior alternative. The difficult phase of political design is not that of choosing among well-articulated alternatives but that of formulating those alternatives. Difficult evaluation is evidence of bad design; good formulation makes evaluation easy.[19]

The design process should actually be iterative, with some values established to begin the process, some tentative forms suggested, some critical responses made to those forms raising other values to consciousness, revisions or replacements made on the previously proposed forms, and so on and on. The process should be genuinely dialectic, always tenative, always striving for higher syntheses.

Incompatibilities

In the preceding section, the values under discussion were those of the designer. There are other , distinct sets of values which need to be considered, those of the parties who will be affected by the designed structure. In most design work, it is hoped that the designer's values will generally correspond to those of the affected parties. Here, however, the problem is special. An institutional design is specifically political if it is intended to help in managing the claims of parties with incompatible values. A purely technological

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[19]This theme is discussed in my Prescribing Foreign Policy, Section 4.4.

organization, in contrast, reflects more ordinary design; it only does what "everyone" wants done. The Universal Postal Union is a good example. Often institutions which had been intended as strong political instruments are overwhelmed by the magnitude of the political conflicts in which they are embedded and are reduced to purely technical functions such as calling conferences, issuing innocuous advice, and publishing statistical data. This is what happened to the Food and Agriculture Organization, for example, and on some issues, to the United Nations itself. If a political structure is to be adequate to fulfill its designated political functions, it must be based on a clear understanding of the situation in which it is to operate.

The political designer should identify the major distinct parties and the ways in which their values are incompatible. To illustrate, the designer planning means for the future administration of the oceans should be aware that

> Nations with strong navies prefer narrow national coastal jurisdictions (territorial seas), while nations with weak navies prefer wide national coastal jurisdictions.[20]
>
> Many nations which are consumers of minerals hope the seas will be exploited for their mineral resources, while many nations which are now major producers of minerals object to such exploitation (because the shift from scarcity to abundance would depress the prices of these commodities).[21]

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[20]Cf. Elisabeth Mann Borgese, The Ocean Regime, Santa Barbara: Cneter for the Study of Democratic Institutions, 1968, p. 26.

[21]Cf. Wolfgang Friedman, The Future of the Oceans, New York: Braziller, 1971, p. 22; The Ocean Regime, Art. IV, Par. 6 and Art. X, Par. C.

Technologically advanced nations prefer freedom
of scientific investigation, while less advanced
nations tend to oppose this freedom (because they
fear the knowledge gained would be used by the
advanced nations in their own narrow self interest).

The designer may ultimately have to make a choice and decide
which of these sets of values, and thus which parties, should be
favored. It should be recalled, however, that the choice has to be
made, not among the abstractly stated values, but among alternative
concrete designs. Rather than making a prior choice as to which
party is to be favored, several designs should be prepared, some
favoring one interest and some favoring another. Before choosing, the
designs should be restudied to determine whether some satisfactory
compromise design could be produced, or even better, if some new
design could be proposed which would be preferred by all concerned
parties. In any case, one cannot smuggle in a proposal favoring one
party with the hope that disadvantaged parties will not take notice.
The designer should be very clear and explicit about how he manages
the problem of incompatible values.

Specifying Functions

A good way to describe the designer's motivating values, and
thus to start the design process, is to say what functions the new
form is to fulfill. A statement should be drawn up saying what the
thing is to do. Though not necessarily detailed at the outset, the
statement may be modified as the work proceeds and the designer's
understanding of the purposes is progressively refined.

The design problem might, for example, be that of establishing
a new International Arms Control Agency. The functions it is to
fulfill might be initially specified as follows:

1. Monitoring and reporting large scale arms flows;
2. Disseminating information on technological
   advances relating to arms control (e.g., on
   safety devices or procedures);
3. Providing neutral observation of conflict
   situations;
4. Serving as "hot line" communications center
   during crises;
5. Monitoring and reporting plutonium production;
6. Offering services as inspection agency for new
   arms control agreements.

Or, as another example, suppose the problem was to establish a
Peace Academy. The functions of the Academy might be:

1. Preparing young people to work in behalf of non-
   violent conflict resolution;
2. Preparing young people to work for the elimination
   of structural violence in less developed countries;
3. Providing a center at which global issues can be
   studied from a variety of perspectives;
4. Promoting the preparation of prescriptive studies
   to guide the management of global issues.

In the Ocean Regime proposed by the Center for the Study of
Democratic Institutions, functions such as these were enumerated:

1. To regulate, supervise, and control all
   activities on the high seas and on or under the
   sea-bed;
2. To regulate effectively the commercial exploit-
   ation of the sea-bed;
3. to issue licenses ...
4. To regulate fishery, fish farming, and aquacul-
   ture ...

   5. To disseminate immediately and effectively
       information and data received from license
       owners regarding their activities in ocean
       space;
   6. To issue regulations concerning pollution ...[22]
       etc.

The list of functions for which forms are to be designed should
be open-ended and subject to modification throughout the design process.
After the initial ideas are stated, the functions should be elaborated
in some detail. To limit the task, it may be desirable to focus
attention on just one or two major functions.

Structural Design Questions

Functions can be fulfilled only through some form: an
instrument, a body, a structure, an organ. That function and form
are intimately connected is clearly recognized by Elisabeth Mann
Borgese:

> Functions and organs, certainly, evolve together.
> It may be useless to peer too far into the future and
> envision details of organisms that may be doomed to
> atrophy by lack of appropriate functions, functions
> that may evolve quite differently from the ways now
> imaginable. It is equally dangerous, however, to draw
> up a list of precise functions, and forget about the
> organs that are to exercise them; for, in this case,
> either the functions may never be exercised at all --
> functions without organs are as utopian as organs
> without functions -- or, eventually, they may be
> exercised very badly, distorted past recognition.[23]

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[22]Borgese, The Ocean Regime, Art. V.

[23]Borgese, The Ocean Regime, p. 3.

Thus, after the desired functions are outlined, the structural design questions, asking what the particular arrangements for the future should be, must be raised. By what mechanisms and processes can the specified functions be fulfilled? What is it that needs to be decided about the future?[24]

For the creation of an International Arms Control Agency, structural design questions like these might be raised:

1. Should there be a standing organization?
2. Should it operate at one particular site, or at a number of dispersed centers?
3. Through what agency should operations be controlled and administered?
4. What should be this Executive Agency's membership?
5. Under what decision rules should it operate?
6. How are disagreements within the Executive Agency to be resolved?
7. How is membership to be determined?
8. How should it relate to the United Nations?
9. How should it relate to existing security alliances?

For a Peace Academy, these are some of the structural questions which come immediately to mind:

1. Is the Academy to be national or international?
2. How is it to be funded?
3. How is it to be staffed?
4. Would it be a degree granting institution?
5. What thematic focus would it have?
6. How would students be selected?

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[24]This and other phases of the design process are also discussed in my essay, "Plan for Designing the Future," University of Hawaii, Dimensionality of Nations Project, Research Report No. 60, January 1972. A shorter version is to appear shortly under the same title in the Bulletin of Peace Proposals.

Before trying to find answers the designer should be sure the questions are well formulated. Attention should be given to the quality and scope of the questions, especially with reference to the assumptions hidden within them. The question of whether the Peace Academy is to be national or international, for example, suggests that a choice needs to be made between these two. But these are really not mutually exclusive and exhaustive alternatives. It is possible to think of a variety of possible blends which mix the features of national and international operations and which could incorporate important non-national or supranational features as well.

The designer should make some clear judgments about which of these sorts of structural design questions he wishes to deal with. He can proceed by expanding and refining some of the questions and setting others aside. The questions provide the raw material for planning the design work. First, broad themes for possible consideration can be reviewed, with some identified as being of core interest, some identified as interesting because of their association with the core group, and some deferred or rejected as distractions from the primary objectives. The design questions that are retained could then be sorted out in a variety of ways.

Once high priority design questions are identified, the answering process should not be hasty. Rather than seize on immediately obvious and appealing answers, it is important to forcibly defer closure for a time, and instead try to develop a broad variety of tentative possible answers. On the question of funding a Peace Academy, for example, ideas like these might be generated:

1. The Academy should be funded by a grant from Congress.
2. The Academy should be funded by a grant from the U.N.
3. The Academy should be funded by a grant from some foundation.
4. Nations should be asked to pay in proportion to the numbers of students they send.
5. Nations should be asked to pay in proportion to the size of their defense budgets.
6. The Academy should be funded by revenues obtained through exploitation of ocean resources, through a new ocean regime that is to be developed.
7. Students and faculty members of the Academy should charge fees for services, for consultation, mediation, arbitration, conciliation, intervention.
8. Contributions should be solicited from private individuals without going through governments.

etc.

To prevent the stifling of imaginations through premature closure, the task of generating candidate answers should be clearly separated from the task of choosing among them.

Partitioning

In designing a form of any kind, many factors need to be adjusted. Variables tend to be interconnected with one another so that manipulating one for some advantage may lead to disadvantageous changes in others. But things are not all connected together equally strongly. Those variables which have strong interconnections among themselves but weak interconnections with others form separable subsystems, and thus, separable design tasks. The design of the curriculum for a Peace Academy, for example, can be substantially separated from the task of deciding how it is to be financed.

Alexander makes the important point that these clusters of interdependence may not correspond to common conceptual distinctions:

> These concepts will not help the designer in finding a well-adapted solution unless they happen to correspond to the system's subsystems. But since the concepts are on the whole the result of arbitrary historical accidents, there is no reason to expect that they will in fact correspond to those subsystems.[25]

It may at first seem sensible to think about staffing and funding of a Peace Academy as quite separate issues, but closer examination is likely to reveal that they are in fact so strongly interdependent that it would be best to answer those design questions together.

There are several reasons for partitioning design problems. Some simply could not be handled otherwise. One cannot really design a whole new political order, for example, any more than one could sit down and design a machine like a Boeing 747. These things are literally beyond the comprehension of any one person, and so they must be divided up into smaller, manageable segments.

Partitioning the larger problem into subsidiary design tasks permits a division of labor in two ways, in time, through the sequencing of the agenda, and in "space," through the distribution of assignments to different simultaneously functioning design teams. One group can concern itself with the International Arms Control Agency's information gathering procedures while another thinks about the problem of disseminating the information.

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[25]Alexander, *Notes* ..., p. 65.

The possibilities for dividing and spreading responsibilities out should not create the illusion that unlimited amounts of designing can be accomplished. Redundancy is valuable in design work. It is probably far better to have three independently operating teams study the same cluster of questions and then compare their results, than to have the three teams work on altogether different issues. Similarly, it is wiser for the individual designer to focus on a small cluster of design questions and answer them well than to spread his attention over a very large variety of questions. More resources devoted to fewer questions helps to assure that those few questions will be answered well. That is likely to be far more valuable than having a great many questions answered superficially.

The inescapable limitations on the resources available for any design task must be taken into account. In addition to allowing for the division of labor, partitioning allows for the ordering of tasks in terms of priority. Some design tasks are simply not worth doing. Some are not worth doing until and unless others are completed first. Detailed questions about the Peace Academy's curriculum are unimportant until after it is determined that it can somehow be funded and staffed. Early commitments on some parts of the overall design reduce the number of contingencies and alternatives which have to be examined in later stages. Efficiency is imperative, and efficiency requires the possibility of partitioning off and deferring some parts of the job.

Systemic Thinking

Subsystems, and thus subsidiary design tasks, can be partitioned off, but even among quite separate clusters some residual interaction will remain. The designer must maintain a keen sensitivity to the ways in which the separate elements fit together to form the whole system.

But how? Admonitions to take whole systems into account are issued so frequently that they become tiresome, especially because they give no advice on how it is to be done. It is not helpful to be told simply to be comprehensive or to somehow take the non-obvious into account. How can one remain alert to larger system considerations while focussing on subproblems of limited scope?

Structural design questions interact, are interdependent, if the choice of which answer is best for one question depends on the answers that are given to other questions. It is on the basis of these contingent relations among answers that one decides which design questions cluster and should be examined together, and which can be separated from one another.

There will still be some interactions cutting across these separate clusters or subsystems. Decisions for the physical plant for the Peace Academy may depend in some way on broad decisions about the curriculum, perhaps on whether or not extensive laboratory simulation exercises should be undertaken by students in the Academy. One solution would be optimal for a given subproblem if other parts of the larger system were in a given condition, and another solution would be optimal if other parts of the larger system were in some

other condition. The designer's sensitivity to the requirements of the system beyond the limited subsystem on which his attention is concentrated can be expressed in the form of conditionals. He can say _if_ the curriculum designers decide that laboratory simulations should be undertaken, _then_ the building should be designed this way, and _if_ they decide against simulations, _then_ the building should be designed that way. The designer of the building can thus take the possibility of simulations into account without deciding that question himself. Of course, he might take up that question himself at another time, then in the role of curriculum designer rather than in the role of building designer. It is the clear specification of contingent relationships of this sort that constitutes the essence of systemic thinking. The subsystem design problems are separate but linked. It is through conditionals that the links are taken into account.

World Order Models Design

Designing the world order of the future is the most ambitious political design task of all, and the most essential. The challenge has absorbed the attention of some of the most imaginative minds in history.[26] Their effort has had some effect. Imperfect though they may be, innovations such as federalism or regional economic communities

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[26]Cf. Sylvester J. Hemleben, _Plans for World Peace through Six Centuries_, Chicago: University of Chicago Press, 1943; W. Warren Wagar, _The City of Man_, Baltimore: Penguin, 1963; Edith Wynner and Georgia Lloyd, _Searchlight on Peace Plans_, New York: E. P. Dutton, 1944.

are magnificent inventions of man. But the greatest legacy of these
thinkers is the lesson they teach, not of the futility of the task,
but of the possibility and value of engaging in world order models
design. Can there be any more eloquent way to express hopefulness?

What elements are required in a proposal that is to be counted
as a world order model? Must it specify the character (or absence)
of, say, a world legislature? Must it describe the character of urban
transportation systems? What are the design questions that are raised
when we ask for a design of a new world order? Knowing what those
essential questions are will help to assure that the designs that are
offered are thorough, and will help to assure that different proposed
models will be comparable with one another.

No consensus has yet been reached, but after very extensive
deliberation and consultation Saul Mendlovitz, the Director of the
World Order Models Project, has listed six major themes as basic:
arms policy, peacekeeping, conflict resolution, economic welfare,
the technological and scientific revolution, environment, and social
justice. The concrete design questions that are implied by these
terms still remain to be articulated, however.

A study would have to be made of the interactions among the
basic design questions to identify the component design tasks. One
major partition seems evident even now. While most utopian thinking
has been concerned with relationships within communities, the major
distinguishing feature of world order models is that they are primarily
concerned with inter-community relations. This provides for a most

useful division of labor. The general structure of inter-community relationships can be designed without specifying the character of intra-community relationships in detail.

The variety of different models that have been proposed for the structure of inter-community relationships is remarkably small. Quincy Wright, for example, lists only four major types, the cosmopolitan world, based on a universal religion or ideology; the imperial world, based on a universal empire or state; the nationalistic world, based on a stable balance of power among state or regions; and the international world, based on some sort of general international organization or federation.[27]

In the abstract, there are just two basic types of structures of inter-community relationships, those based on balance and those based on hierarchy.

Balance is maintained through continuous bargaining and negotiation among peers. This is Wright's nationalistic world, like the present one, where the structure is maintained through means such as diplomacy and collective security relationships. The fatal weakness of this model is that the equality among member units is inescapably fictitious, and the idealized balance succumbs to a hierarchical structure in which some small number of superpowers exercise de facto authority. The global balance of power has always been one of domination rather than equality.

In a hierarchical system there are dominant-submissive relationships among organizations. There may be one nation exerting

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[27] Quincy Wright, On Predicting International Relations: The Year 2000, Denver: University of Denver Monograph Series in World Affairs, 1969.

power over other nations, in an _imperial_ relation, or a collectivity of nations exerting power over other nations through a condominium arrangement. The power of the imperium is simply seized. Or power may be exerted by some central authority created for that purpose and limited in scope to particular functional sectors, as in Wright's _international_ world. Though limited and controlled, and legitimated by having power vested in it by the consent of the subject nations, the world of international or supranational authority is nevertheless hierarchically organized.

Many specific proposals advocate mixtures of these two forms. Federalist ideas, for example, are based on a formula of balance among units combined with elements of submission to some central authority. There is a call for balance in some functional sectors, but for dominance in others.

A third sort of proposal for managing inter-community relation-ships is that of _amalgamation_ through a blurring of the distinctions among units. This is the interpenetrated and intermeshed world foreseen by Johan Galtung, the integrationists, or the functionalists and neofunctionalists.[28] It is Wagar's _City_ _of_ _Man_ or Quincy Wright's _cosmopolitan_ world. It is the ultimate socialist/communist world,

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[28]Johan Galtung, "On the Future of the International System," _Journal_ _of_ _Peace_ _Research_, 1967, pp. 305-333, republished in Robert Jungk and Johan Galtung (eds.), _Mankind_ _2000_, Oslo: Universitetsfor-laget, 1969; Philip E. Jacob and James V. Toscano (eds.), _The_ _Inter-gration_ _of_ _Political_ _Communities_, Philadelphia: Lippincott, 1964; Joseph S. Nye, Jr., _Peace_ _in_ _Parts_, New York: Little Brown and Co., 1971.

or the world in which capitalism and communism converge, as envisioned by Academician Sakharov. But amalgamation is not really a form of order; it is rather an absence of structure grounded in a presumed absence of a need for ordering principles. If there are no distinct units whose interrelationships need to be managed, the problem of ordering becomes moot.

World order designers divide over whether this can be a genuine solution. In my view, amalgamation does not meet the difficulties at all. Solving the problem of global ordering in this way is no more useful than abolishing international war by naming the fighting units something other than nations. Wagar is absurdly wrong when he says that "only sovereign polities make wars."[29] Amalgamation only transforms the problem from one of ordering inter-community relationships to one of ordering intra-community relationships, a differentiation which at this level is without substance. The City of Man itself will have to be divided into boroughs of some sort.[30] If not along administrative lines, divisions and cracks of other kinds will inevitably appear in the "unitary republic of mankind." It is still necessary to say how order among the parts is to be organized and maintained. Although he shuns the theme, even Wagar acknowledges that a world government would be needed which, among other functions, would "guard against counterrevolution and civil warfare."[31]

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[29] Wagar, _Building the City of Man_, p. 31.

[30] Wagar, _Building the City of Man_, p. 143.

[31] Wagar, _Building the City of Man_, p. 140.

To enumerate those general design questions which should be addressed by any world order model is in effect to provide a guide for the critical analysis of such designs. This reasoning can be reversed as well; a good way to arrive at general design questions would be to undertake close critical analysis of specific world order models. In this sort of critical review one would be more concerned with the quality of the questions that are taken up in a proposal than with quality of the particular answers that are given.

But political design, and world order design in particular, should never be reduced to a scholarly game of scoring points in critical analysis and academic arguments. The work should be constructive and cumulative, not only producing elegant blueprints but building toward the actual innovation of more desirable political worlds. There is no division of labor which affords the political architect the luxury of handing over his designs to some contractor who can, with confidence, assure successful implementation of those plans. The designer himself must follow-through, pushing for the adoption of his proposals. He will usually fail. But he succeeds if he learns from those failures and, in consequence, produces successively better designs.

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